Bye bye blackbird?

Not yet, but repellent has promise.

By John Cummings

As the sun rises, a rice farmer stands alone patrolling acres of newly planted rice. A small black dot appears on the horizon. As he watches, the dot grows in size and moves randomly about the morning sky. Soon the black dot turns into a long black ribbon resembling billowing smoke that twists and turns like an out-of-control roller coaster. Blackbirds—millions and millions leaving the coastal marshes of Louisiana and heading for newly planted rice fields.

The rice farmer has tried in vain to stop the blackbirds from eating his rice crop. He has shot, scared and hazed using every conceivable device. Everything he's tried has met with limited success. The birds keep coming.

He is not alone. This same scenario is repeated by rice farmers across Louisiana, Texas, Mississippi, Arkansas and Missouri.

Blackbirds in these states cause more than $44 million in damage each year to newly planted and ripening rice. Each year millions of blackbirds migrate to these states from northern breeding areas in the Midwest, the northern Great Plains and Canada. Some winter roosting sites in Louisiana coastal marshes swell to more than 15 million blackbirds. Most of the roosts are made up of redwing blackbirds, brown-headed cowbirds and common grackles.

Scientists from the USDA's National Wildlife Research Center (NWRC) are working with the Louisiana Blackbird Committee, Louisiana Rice Growers Association, Louisiana Rice Research Board and LSU Rice Research Station to address the problem of too many blackbirds at rice planting and harvesting time in Louisiana.

SCREENING POTENTIAL REPELLENTS

One of the NWRC's top priorities is the development of a blackbird repellent for use on newly planted rice seed and ripening rice. The goal is to prevent birds from feeding on rice either by making it unpalatable or causing birds a slight intestinal sickness so they pass up second helpings.

Researchers have evaluated several chemical compounds through a systematic series of chemical screenings, laboratory tests and field evaluations aimed at registration of a selected repellent with the Environmental Protection Agency. Some of the compounds such as mesurol, methyl anthranilate and lime were effective at different stages of testing, but failed to be effective overall, economical and/or environmentally safe.

One potentially useful compound that has shown promise is anthraquinone. It is the active ingredient in Flight Control, a product produced by Environmental Biocontrol International and registered with EPA as a bird

Blackbird life

In the Southern rice belt, both resident and migratory flocks put a dent in yield. Northern migrants arrive in late October or early November. Warm fall weather in the North will delay their travels. They mass in coastal roosts and forage on ripening and spilled grain. Migrant flocks begin to head back north in February. By the time they reach Missouri, the birds start dispersing over a wide geographic area. Among flocks that stay behind, redwing males disperse in March to find and defend breeding territory. After migrants leave, resident flocks spread out over a larger area because of the increased number of planted rice fields. The threat of devastation to rice fields goes down until fall. Then as the Northerners return and flocks regather, ratoon damage soars.

Blackbirds congregate in large roosts at night. Roosts of millions of birds may be only a mile apart. At first light, birds stream out. In the late fall and early winter, they feed near their roosts, but as they clean out fields they travel farther—as much as 30 miles. Not all head for the same field. When they arrive, they feed and loaf in trees and bushes around the fields until quitting time comes, and then they head home in time to be settled by dark. *—Mary Ann Rood*

Putting out the unwelcome mat

So far, control of blackbirds is like a cure for the common cold—it's not quite here yet, but try this for partial relief now. Especially in combination these tactics help, according to Allen Wilson, USDA Wildlife Services biologist in southwest Louisiana.

Delay planting. Especially for fields next to roosts, if you're first to plant in the spring, you make planting time party time for blackbirds. Wait until other growers are planting so yours won't be the only open fast-food spot for hungry birds. Talk to your neighbors, and aim to plant in blocks. In test fields in southwestern Louisiana, delaying planting from mid-March to mid-April reduces damage from 98.8 percent to 8.7 percent. LSU researchers found no significant reduction in yield or ratoon crop when early-maturing varieties were planted.

Cover rice seed. Blackbirds had rather not dig for their dinner. Drill seed or harrow after broadcast seeding by airplane. In very level fields, continuous flood and pinpoint flooding can protect seed because blackbirds don't like to land in open water.

Clean farming. Taking away brush and trees from ditches and levees cuts down on places to nest and hide. Control of seed-producing weeds eliminates another food source that can draw birds.

Scarier scarecrows. Stuffing your old clothes with straw won't help, but more up-to-date tactics can. Cannons—most often propane devices that produce a single explosion or a series of explosions—can frighten away birds. Manufacturers say one cannon can protect about five acres. Combine with shooting birds so birds learn to fear the noise. Tape recordings of the birds' alarm or distress call and balloons that mimic natural predators have also been used.

DRC-1339. The only chemical now available on a limited basis is Starlicide. The baiting program, under the supervision of USDA Wildlife Services personnel, aims at blackbird staging areas, not fields. Its goal is to reduce the numbers of birds and disperse flocks in the month before planting. Louisiana has applied for Sec. 18 emergency use in eight parishes for 1999. Texas has a similar program. Wilson says DRC-1339 avoids harm to most non-target birds and breaks down almost completely in 48 hours, so leaves no residue.

—Mary Ann Rood

repellent for Canada geese on turf. Louisiana has applied for Sec. 18 use on rice for 1999. NWRC researchers have tested Flight Control as a seed treatment for newly planted rice. In 1997, various formulations, concentrations and application rates of Flight Control were systematically tested in enclosures. Initial feeding tests of 2.0 percent product indicated that redwing blackbird and brown-headed cowbird consumption of treated rice seed was reduced an average of 96 percent and 88 percent, respectively. In tests where redwing blackbirds were offered only treated rice, consumption decreased to zero after the second day of the test.

FIELD TESTS

In 1997 and 1998, NWRC researchers field-tested Flight Control's effectiveness in reducing blackbird damage to commercially planted rice fields near Gueydan, La. This area has had a history of high blackbird damage during spring planting. Each year researchers set up a field test design that made test fields the only choice for blackbirds in the area. Test fields, located next to major roosting sites, were usually the first ones in the area to be planted.

Bird observation and damage assessments conducted by researchers each year indicated that Flight Control significantly reduced blackbird damage to treated rice seed. Untreated rice fields planted adjacent to treated fields sustained constant bird pressure until fields were completely damaged.

FUTURE RESEARCH

Rice and sunflower representatives from respective states were set to convene in February at the NWRC to discuss past and future blackbird research. Why sunflower growers? Some of the same birds that cause damage to rice in the South also cause damage to sunflowers in North and South Dakota. The main objective of the meeting is to develop a plan for future research that will address the economic impacts of blackbirds on rice, movements and changes in blackbird populations in rice-growing states, repellent development and evaluation, and management of blackbird populations.

All involved feel that managing the blackbird problem will come from multi-state involvement. Dwight Hardee, chairman of the Louisiana Blackbird Committee, believes the blackbird problem has been put on the back burner long enough, and it is now time to come up with a multi-faceted approach. Through this committee, other state rice associations, and a cross-commodity coalition of farmers, he says that farmers will be able to get some answers. The Louisiana Rice Growers Association, Rice Research Board and LSU Rice Research Station have funded blackbird research in Louisiana. ***RJ***

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